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Social production of disasters and disaster social constructs

An exercise in disambiguation and reframing

Lei Sun
Institute of Geology, China Earthquake Administration, Beijing, China, and
A.J. Faas
Department of Anthropology, San Jose State University, San José, California, USA

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Abstract

Purpose – The purpose of this paper is to determine whether it is useful to tease apart the intimately related propositions of social production and social construction to guide thinking in the multidisciplinary study of disasters.

Design/methodology/approach – The authors address our question by reviewing literature on disasters in the social sciences to disambiguate the concepts of social production and social construction.

Findings – The authors have found that entertaining the distinction between social production and social construct can inform both thinking and action on disasters by facilitating critical exercises in reframing that facilitate dialog across difference. The authors present a series of arguments on the social production and construction of disaster and advocate putting these constructs in dialog with vulnerability frameworks of the social production of disasters.

Originality/value – This commentary contributes to disambiguating important theoretical and practical concepts in disaster studies. The reframing approach can inform both research and more inclusive disaster management and risk reduction efforts.

Keywords Social constructionism, Disaster risk reduction, Vulnerability, Political ecology, Disaster study

Paper type Conceptual paper

1. Introduction: social production and social construction

Our question in this paper is whether it is useful to tease apart the intimately related propositions of social production and social construction of disasters to guide thinking in the multidisciplinary study of the topic. In philosophy and social theory, social constructionism generally refers to the idea that we know the world through concepts we ourselves produce. It is the position that much, if not all, of what we take for reality has been historically produced in complex social interactions[1]. This stands in stark contrast to realism, a position that holds that we can perceive nature and objects in the world as they are, independent of history and our conceptual schemes. The notion that phenomena we perceive are human constructs and not facts of nature frequently includes two closely related propositions: there are histories and/or processes that cumulatively produce the phenomena we perceive and experience (historical production); and the phenomena we perceive are, in effect, conceptual constructs co-constitutive of historical production that simultaneously facilitate our engagement with these phenomena while distorting our perceptions of them (social constructs).

In the context of disaster studies, authors frequently employ the terms social production and social construction interchangeably (e.g. Rodríguez and Barnshaw, 2006; Cannon *et al.*, 2014; Oliver-Smith *et al.*, 2017); and both do generally refer to the notion that disasters are products of human practices, with root causes in social structure and social process

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(including perceptions and practices). This is in stark contrast to naïve realist perspectives that disasters result from nature and exist outside of human agency and the social order. For instance, Anthony Oliver-Smith and colleagues (2017) identify environmental degradation, poverty, unbalanced development, population growth and related factors as "risk drivers" that contribute to the process of disaster construction. In a chapter of the World Disaster Report 2014, Terry Cannon and colleagues (2014, p. 185) explicitly describe the social construction of disaster as "trigger events (natural hazards)" interacting with a vulnerable population, while arguing that "social construction" means that disasters do not automatically result from hazards. Yet, while most studies focus on the historical production of disaster, not all studies using the term "social construction of disasters" concern how things are constructed as disasters with a shared meaning. Some, however, do employ explicitly constructionist perspectives, emphasizing, in addition to historical production, the social constructs that shape knowledge and guide action.

Our intention in this paper is not to critique those authors who use the terms social production and social construction (interchangeably or otherwise), but rather to develop thinking along these complementary lines. Importantly, we have found that entertaining the distinction between social production and social construct can inform both thinking and action on disasters by facilitating critical exercises in reframing that facilitate dialog across difference. In what follows, we present a series of arguments drawn from a multidisciplinary review of literature on the social production and construction of disaster. In the conclusion, we advocate putting these constructs in dialog with vulnerability frameworks of the social production of disasters to facilitate critical dialog across difference that we hope can foster the development of more inclusive approaches to disaster risk reduction, response and recovery.

2. The historical production of disasters and vulnerability through development, (post)colonialism, environmental justice and science and technology studies

From the end of 1940s to the early of 1960s, referred to by some as the classical period of disaster studies (Perry, 2006), disasters were mainly viewed as events outside society. Charles Fritz's (1961, p. 655) definition of disaster exemplified social science thinking at the time:

> [a]n event, concentrated in time and space, in which a society, or a relatively self-sufficient subdivision of a society, undergoes severe danger and incurs such losses to its members and physical appurtenances that the social structure is disrupted and fulfillment of all or some of the essential functions of the society is prevented.

This structural functionalist understanding of disaster reflects at least two ontological and epistemological views – disasters exist as objective events and outside of social order (Tierney, 2007). The objectivism and event-specific views are influential and continue to guide some research in the field of disaster studies today, but they have been increasingly marginalized in favor of political ecology and social constructionism since the end of this classical period.

Today, social scientists generally understand disasters as being socially produced and emphasize the political economy/political ecology of disasters to argue that political and economic forces operating at different levels (local, regional and international) contribute to disaster vulnerability (e.g. Tierney, 1989; Wisner *et al.*, 2004). Beginning in the 1970s, scholars of disaster increasingly adopted human ecology and vulnerability frameworks (Burton *et al.*, 1968), while also drawing on theories of social conflict, social inequality and political economy (Tierney, 1989), and progressively developed the argument that disasters come from society and have root causes in social processes. Those studies were conducted with an emphasis on social structure and social process to explore and interpret how and why disasters happened. In their influential book *At Risk*: *Natural Hazards, People's Vulnerability, and Disasters,* Piers Blaikie and colleagues (1994), later revised as

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Wisner *et al.* (2004), argue that disasters originate in social conditions that may be far removed from "disaster triggers" such as earthquakes and hurricanes. They stress that "to understand disasters we must not only know about the types of hazards that might affect people, but also different levels of vulnerability of different groups of people. The vulnerability is determined by social systems and power, not by natural forces" (Wisner *et al.*, 2004, p. 7). As Kathleen Tierney (2007, p. 509) writes, "disasters are episodic, foreseeable manifestations of the broader forces that shape societies." Though authors developing these arguments have drawn on multiple bodies of literature over the past four decades, we trace this line of thinking through four broad movements in social science and disasters: development critiques, postcolonial studies, environmental justice and science and technology studies.

2.1 Development and the de-naturalization of disasters

Some of the foundational studies of the historical production of disasters focused on the role of development. Widely regarded as a sort of opening salvo in the charge to de-naturalize disasters, Phil O'Keefe and colleagues' (1976) short article in *Nature*, "Taking the Naturalness Out of Natural Disasters," made the case that disasters resulted from the collision of hazards (natural or technological) with a vulnerable population. Moreover, they pointed out that the increase in disasters was not (then) correlated with climactic or geological changes, but rather the increased polarization of developed and underdeveloped nations, which caused further socioeconomic polarization within the latter. Others continued the focus on development, arguing that "most disaster problems are unsolved development problems. Disaster prevention and mitigation is thus primarily an aspect of development" (Wijkman and Timberlake, 1984, p. 233). This orientation remains vital in the twenty-first century. Marci Gerulis-Darcy (2008) attributed the disastrous impacts of Hurricane Mitch in Posoltega, Nicaragua, to the ongoing ecological and social neglect of the impoverished popular majority and Nicaragua's peripheral status in the global political economy, as well as the consequences of the decade-long Sandinista revolution and more than 40 years of the Somoza dictatorship. Sapam Singh's (2015) study of a fishing community in Orissa, India identified seasonal economic activities, lack of education, poverty, geographical location and political marginalization as root causes of disaster vulnerability. Both studies explicitly concentrate on the "social production of disasters" to convey the same notion – social vulnerability to some extent determines whether hazards result in disasters, while the roots of social vulnerability and disasters are located in power-laden social relations and processes.

Disaster studies as critiques of development can be, at times, much more narrowly focused than the broader political economic framing offered by O'Keefe and colleagues' with attention focused on intensive development in poor countries and on hazards overlooked "in the planning and implementation of some development activities" (Hagman, 1984, p. 54). Or, in the case of Hurricane Harvey in Houston, Texas, USA, some restricted critique to urban expansion paving thousands of acres of wetlands that had previously helped absorb rainfall and poor flood infrastructure that rendered the city flood prone and unable to sustain the heavy rainfalls that came with the storm[2].

2.2 Postcolonial critique of disasters

The 1985 Mexico City earthquake catalyzed the formation of a multidisciplinary group of Latin American social scientists concerned with disaster, La Red de Estudios Sociales en Prevencion de Desastres en America Latina (Social Studies Network for Disaster Prevention in Latin America or La RED) in 1991. They likewise rejected the notion of disasters as natural and introduced important ideas, such as the fact that, unlike the western subjects considered in risk perception studies at the time, many people in the Global South had

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important environmental knowledge and a nuanced understanding of hazards to which they were exposed (e.g. Maskrey, 1993). They also began developing a postcolonial critique of the production of disaster that located the origins of contemporary vulnerability in the processes of invasion, conquest and colonization that subsequently provided the structure for later development models and social hierarchies in postcolonial societies (e.g. Garcia Acosta, 1996). This broader historical perspective was especially nurtured by historian-anthropologist Virginia Garcia Acosta, a central figure in LA RED. English language readers will be most familiar with Anthony Oliver-Smith's (1999a) postcolonial analysis of the 1970 Ancash earthquake, *Peru's 500 Year Earthquake*, in a line of thought influenced by community with the LA RED (see Faas and Barrios, 2015). In this influential publication, he interpreted the Peruvian earthquake of 1970 as a product of the historical processes set in motion by the Spanish conquest 500 years earlier.

2.3 Environmental (in)justice and science and technology studies

The 1990s also saw the growth of social science focused on environmental (in)justice that turned the development and inequality critique back inward on western nations while drawing on science and technology studies to emphasize the politics of scientific knowledge production. Melissa Checker (2007) influential study of a low-income African American community in Louisiana exemplifies this area of research. Checker added to a growing body of research that demonstrated that poor and minority communities were more likely to be exposed to technological hazards, such as toxic release. She then examined the complex relationships this community had with risk perception and state experts who assessed risk and hazard exposure. For one, the African American community consumed more fish than the statistically average American (i.e. healthy white male) considered in risk assessments. Checker advocated evaluating a greater range of actual human variation than is often considered in scientific risk studies and considering how hazards and risks may work collectively – not merely separately. This led her to argue for critiquing and contextualizing the generalizing claims and political assumptions of science (more on this below). And others have gone further to identify climate change as a human rights issue, not only because of the impacts on human life, but also because many of the earliest and most severe impacts are being experienced by peoples who have had little to do with the production of climate change (see Marino, 2015).

2.4 Cumulative vulnerability framework

The denaturalizing critiques of development-based, postcolonial and environmental justice culminated in a multidimensional vulnerability framework – or bundle of frameworks (for overviews, see Faas, 2016; Marino, 2015) – that situates the proximal causes of disaster (e.g. hazard, event) in distal historical contexts. The concept is now employed to index the uneven distribution of hazards in society and individual and group capacities to prevent, respond to, and recover from disaster (e.g. Wisner *et al.*, 2004). In addition to denaturalizing disasters, it has focused attention on temporality – not only that there are histories to disaster that begin long before any shock is felt and continue long after, but also that they are not necessarily sudden or temporary, and often the hardest hit live lives of chronic insecurity. Thus, while multiple vulnerability frameworks have existed for a few decades, today this type of analysis generally draws on the multiple traditions outlined above to focus attention on the historical production of inequality and uneven distributions of power and risk in societies.

However, while social production approaches challenge the realist idea that disasters are events with discreet spatial-temporal features, they do not all adopt hard constructionist arguments. First, the thesis that natural hazards are proximal but not root (distal) causes of disasters (Faas, 2016) implies that these triggers do exist "out there" (Wisner *et al.*, 2004).

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Second, the thesis that risk, hazards, and disasters are created or exacerbated by social, economic and political process also implies a degree of objectivity independent of human thought and perception (Tierney, 2014).

3. Social construction: fetishizing nature, moral meteorology and situating truth claims

Some disaster studies do employ the concept of "social construction" in ways epistemologically and ontologically resonant with constructionist perspectives, presenting disasters as partially or wholly subjective (e.g. Hewitt, 1998; Tierney, 2007); in some cases, hazards themselves are regarded as socially constructed (e.g. Bankoff, 2004). People often think about and act toward disasters rather matter-of-factly, but these perceptions and practices are shaped by social and cultural factors such as worldviews, social interactions, political interests and institutional discourses (e.g. Douglas and Wildavsky, 1982; Boholm, 2015). Ilan Kelman and colleagues (2015) pointed out that "vulnerability and resilience to disasters" can be subjective; whether things (e.g. environmental phenomena) are viewed as vulnerability or resilience depends on one's perspective. Havidán Rodríguez and Russell Dynes (2006) found that the public and influential decision makers derived their basic understandings of Hurricane Katrina from narratives constructed by network and cable news television. Tierney (2007, pp. 507-508) stressed that disasters can be constructed or reconstructed to serve institutional interests, and "claims-making and institutional actors can frame disaster definitions and priorities for ameliorative action." The study of risk and disaster constructs cannot only tell us about how disasters are perceived, but also how they are produced precisely because perception is socialized and born of context (Douglas and Wildavsky, 1982) in specific times and places and obtains as a part of "an active social and discursive process that constructs relevancy and meaning within the context of the social fabric" (Boholm, 2015, p. 11). Risk itself is a relational construct that interacts with other social phenomena and actors to inform beliefs about what is harmful and what factors and processes (might) produce harm (Boholm, 2015, p. 162).

In this section, we introduce just a few varieties of social construction to consider. The range of constructs discussed is hardly exhaustive, but our aim is merely to provide an indication of the types of constructs we might encounter and engage in disaster management. The evidence supports the idea that, in addition to history, there is a politics to the perception of risk, hazards and disasters and thus both to their construction and their remedy. Studies in this vein focus on process and how risk, hazards and disasters are framed and interpreted by specific actors and groups.

3.1 Fetishizing the "nature" of disasters

The misrecognition of history for nature is a type of fetishization with grave consequences because it elides the role of human actors in creating the conditions for catastrophe and sees the consequences as unforeseeable and therefore largely unpreventable, except perhaps through (technocratic or community based) emergency preparedness solutions. One need only venture an internet search for the terms "natural disaster" (in any number of languages) to find indicators of the prevalence and persistence of this construct in the press and public imagination. But the notion of natural disasters also exhibits a zombie-like quality in that it continues to circulate in serious academic circles as well. Consider that, in early 2018, a major journal of natural resource policy began organizing a special issue on the topic of "Effective Management of Natural Disasters" and has "natural disasters" listed among welcome manuscript topics in the journal mission statement. However much the contributions to the journal might historicize disasters, the fact remains that the "nature" of disasters remains latently fetishized in disciplinary vernacular. Responding to a posting of the call for the special issue on the listserv of the Society for Applied Anthropology's

Risk and Disasters Topical Interest Group, Terry Cannon, Research Fellow at the Institute for Development Studies and long a leading scholar of disaster, responded:

> I cannot believe that this special issue is referring to "natural" disasters! After forty years of pushing back through much research and many publications it became much more widely accepted that disasters are triggered by natural hazards, but whether or not they turn into disasters is a matter of social construction[3].

Thus, within the social science of disasters, many scholars and practitioners express a mixture of weariness and resolve when it comes to frequently finding themselves having to repeat what they argue should be an elementary principle of disaster study and management (e.g. Olson, 2018) that calls attention to the root causes of disaster that must be addressed in management and risk reduction. Indeed, the construct of disaster as natural has exhibited a remarkable resilience of its own.

3.2 Moral meteorology and situating truth claims

In the immediate aftermath of Hurricane Harvey's devastation, American Evangelical Minister Kevin Swanson took to his radio show to report that the storm was God's punishment for Houston's sins of electing a "very, very aggressively pro-homosexual mayor" (*The Independent*, 2017, September 6). This is an example of a variety of social construction historian Mark Elvin (1998) calls "moral meteorology." He describes how in Late Imperial China rainfall and sunshine were attributed to the good and bad behavior of the citizenry, with increasing degrees of consequence for the behavior of bureaucrats and, ultimately, the Emperor. Greg Bankoff (2004) found that cultural and religious beliefs in the Philippines created consensus explanations of natural hazards and disasters as the work of vengeful deities, which he interprets as local culturally accepted coping strategies that to some extent maintain a degree of cultural resilience to disasters.

Likewise, in her ethnography of the impacts of the 2004 Indian Ocean tsunami in Sri Lanka, Michele Gamburd (2013, pp. 33-36) presents cases of people claiming that the disaster's impacts visited karmic justice on people because of good or bad prior action. Fishermen killed fish (a Buddhist taboo), sex workers compromised virtue and greedy businesses all courted disaster. That temples had gone unaffected was further evidence of karma. Others observed that such claims were inconsistent: many businesses, sex workers and animal slaughtering operations were unaffected and the temples were simply of superior construction and material. Some said it was the earth punishing them for destroying the coral reef, while others said it was just an earthquake and a wave, not karmic or moral.

However, multiple competing truth claims can be especially revealing. Moral meteorology in Late Imperial China held those in power to a higher standard than the citizenry at large (Elvin, 1998). As she traced the networks of actors and activities in post-tsunami reconstruction, Gamburd (2013, pp. 167-168) also documented many cases where victims accused leaders and aid brokers of corruption. While she admits that some corruption was possible, she found little evidence to support the extent of corruption implied by the many second- and third-hand reports she encountered. This led her to reframe the evidence and recognize accusations as political devices that not only positioned accusers to receive more aid and support their political parties, but, critically, also influenced leaders to increase transparency and accountability in aid distribution. Roberto Barrios (2017) refers to this sort of behavior as "bad victimhood." Aid recipients and reconstruction beneficiaries bring emotions into the public sphere, where they are unwelcome, and can challenge the power of aid agencies while asserting their own agency in determining how relief and recovery works (Barrios, 2017, p. 124). Thus, Barrios (2017, pp. 113-114) argues, it is often more important to understand the social worlds and relationships that make rumors

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possible, believable and capable of mobilizing action (see also Benadusi, 2015). Responding to these claims by understanding the contexts from which they emerge can inform practitioners and policy makers in devising locally appropriate and sensitive recovery and reconstruction programs.

We might consider, then, that multiple narratives may have truth and meaning. In 2013, the typhoon known globally as Haiyan devastated the Philippines and inspired an impassioned debate about the consequences of climate change after Philippine leaders raised the issue at the United Nations Climate Change Conference in Poland (Bankoff and Borrinaga, 2016, p. 46). Yet, domestically, where the storm was known as Yolanda, Philippine citizens focused on political responsibility at local and national levels, incompetence, and varieties of identity. While Bankoff and Borrinaga (2016) find little evidence to support the role of climate change in the production of this particular storm system, it is worth noting that both narratives can reveal important aspects of the disaster and inform response, recovery and risk reduction.

3.3 Vulnerability as instrument of marginalization and pretext for intervention

That disaster provides an aperture and cover for varieties of opportunism – disaster capitalism, the spectacle and reassertion of state (bio)power and foreign intervention – that are themselves social constructs is well documented (Faas, 2018; Schuller, 2016; Marchezini, 2015; Gunewardena and Schuller, 2008). Often what passes for sound science is itself politically situated and can serve (however inadvertently) as an instrument of marginalization and a pretext for varieties of opportunism, intervention, and colonization. Writing of the state response to devastating frost that affected the Enga of New Guinea in 1972, Eric Waddell (1975, p. 250) observed, "a fundamental premise was that the victims had no satisfactory means of their own to cope with the crisis." Historian Greg Bankoff (2001) views vulnerability as yet another trope – following disease and poverty – in a history of concepts employed to portray the Global South as fundamentally unstable, unsafe and in need of intervention by western nations. Mark Schuller (2016) documented precisely how this played out in Haiti following the 2010 earthquake. The notion that Haiti was a "weak state" and that the destruction of government buildings equaled the destruction of the government itself justified foreign intervention that facilitated the dissolution of the Haitian Parliament and the imposition of the rule by the Interim Haiti Recovery Commission, half of which was non-Haitian. The Haitian government was decisively marginalized in aid and recovery planning and implementation. This naturalized foreign control and reduced the Haitian people to objects of aid in a "top-down, militarized, foreign-led response" (Schuller, 2016, p. 80).

Thus, vulnerability is itself a construct with potentially problematic implications. In their study of the experiences of the Wutai Rukai in recovery and resettlement after Typhoon Morakot, Minna Hsu and colleagues (2015) point out that the discursive construction of vulnerability is not merely a western narrative about the Global South. Instead, they situate their study in histories of colonization and domination of Wutai Rukai lands and peoples: Dutch, Koxinga, Qing dynasty, Japanese, the current government and the bevy of nongovernmental organizations operating in the post-disaster context. Contemporary government and NGO personnel pathologized Wutai Rukai lifeways and reproduced their vulnerability in the process of ostensibly facilitating recovery, perceiving Indigenous communities as inherently vulnerable "problem populations." This perspective reproduced colonial patterns of displacement, dislocation and disadvantage. They counter this narrative with the concept of "procedural vulnerability" (after Veland *et al.*, 2013) to explain "the ways that systemic risks constructed in colonial relationships [and] reinforced by the post-colonial relationships affecting Indigenous groups create a complex risk landscape in which natural hazards are contextualized" (Hsu *et al.*, 2015, p. 309).

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4. Reframing: reconciling historical production and social constructs

Disaster study is multi-/trans-disciplinary and application oriented. It has long been recognized that disasters, risk (and risk perception), hazards and vulnerability are contextual, subjective and products of culturally shaped learning (see Lewis, 1999; Bankoff, 2004; Schipper, 2010; Kelman *et al.*, 2015, 2016; Sun *et al.*, 2018). Given the varieties of disaster theses, it is difficult to say one framework, model, or paradigm should suit all scenarios (e.g. Oliver-Smith, 1999b). Although there may be ontological and epistemological differences between the social production and social constructionist approaches, we argue that intentional exercises in synthesizing the two broad domains are both sensible and practicable. The ways situated actors construct disasters and associated actions may themselves become root causes of future disasters. For example, public debates about the "construct" of climate change as anthropogenic or part of a "natural" cycle might determine the severity of future disasters associated with such hazards as droughts, floods and storms. And social construction process in some communities might explain how and why some disasters obtain at the local level.

Many social scientists are accustomed to and rather comfortable with contesting the fetishization and reification[4] of the acuity and naturalness of disaster to call attention to distal root causes of disaster and how they might be addressed in risk reduction and broader social and political economic changes. Well and good. Yet, while we share this commitment, we would caution against merely dismissing varieties of social construction of disaster and instead argue for a provincialization of all perspectives as we think carefully about the social worlds that make these constructs both believable and capable of mobilizing action. A diachronic history of theoretical frameworks of disaster – discrete events, structural functionalism, political ecology, postcolonial studies, etc. – can be read as evidence of the social construction of theory itself (e.g. Hewitt, 1998). One key shortcoming of the political ecology of vulnerability approach is that it preserves and privileges the subjectivity of western science over other ways of seeing and being. It can also be used to render non-western places and peoples as addled, corrupt, diseased, unstable, "problems" in need of western intervention. And this does not only emerge from centers of power. Checker (2007) invoked the concept of "risk perception shadows" (after Stoffle *et al.*, 1988), which refers to the tendency of historically marginalized groups to distrust projects that entail potential health or social impacts and doubt official statements regarding the potential dangers of these projects (see also Liebow, 1995). This leads to her ultimate point that critical analysis of risk science can expose the politics of scientific knowledge production.

To attend to the multifaceted processes that inhere in disasters and their production, we must contend with multiple ways of knowing – we think of the many people of the world who view nature as including humanity and culture, who see landscapes as part of their communities. Many studies have pointed to the importance of understanding the phenomena that multiple actors, especially those engaged in primary production, use as evidence that climate and other environmental factors are changing to grasp the subtle implications of global patterns for local conditions (e.g. Crate, 2008; Roncoli *et al.*, 2009; Marino, 2015). Local experiences underpin the ways communities – especially marginalized communities – interpret and contest environmental science and concerns for environmental justice should inform the way we evaluate environmental science practices and conceptualizations (Checker, 2007).

Taking social constructs seriously does not mean the negation of (social) science (or any knowledge practice) and rendering all things relative and constructed. Ben Wisner *et al.* (2004) developed a vulnerability framework that at once critically engages the historical production of disaster without eliminating the agency of natural and/or technological hazards. Local narratives of risk, hazard and disaster may align well with

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and/or complement expert models, but simultaneously be out of step with the (often hyperbolic) crisis rhetoric of outsider activists, media and state and nongovernmental organizations (Marino, 2015, pp. 33-38). Thus, engaging multiple narratives should not be an exercise in ventriloquism – seeking validation in local narratives – but a good-faith engagement with how people speak for themselves and the worlds in which they are embedded.

Our position is that it is both feasible and desirable to provincialize (not negate) the political ecology of vulnerability and to facilitate exercises in reframing with multiple peoples and perspectives. By reframing, we mean "the deliberate process of looking at a situation carefully and from multiple perspectives, choosing to be more mindful about the sense-making process by examining alternative views and explanations" (Bollman and Gallos, 2011, p. 23). In our estimation, this amounts to engaging in exercises to place salient social constructions in conversation with evidence of the social production of disaster, working with framings of disaster that are "experience near" (i.e. close to people's perceptions and encounters; see Geertz, 1974), as opposed to "experience distant." That is, if vulnerability is a radical critique that places the subaltern at the center of analysis, why not invite subaltern analysis itself into conversations? Listen carefully to narratives of power and power as revealed in narrative. Take seriously radically different epistemologies and ontological claims because they surface relational entanglements with humans, environments, and what westerners tend to think of as the supernatural, but which pervade human-environmental relations and thereby exercise agency (e.g. De La Cadena, 2015). Helen Verran (2012, p. 143) has referred to such exercises as "cultivating epistemic disconcertment." It is a project far easier said than done, but we advocate attempts in disaster research, policy, and practice to provincialize our own frameworks and disrupt the parameters of the thinkable.

5. Implications for research and disaster risk reduction

The production and construction of disasters are rather complex phenomena that merit integrated research and radical exercises in reframing. In recent decades, there has been a call for bridging disciplinary isolation in disaster and disaster risk reduction research (Gall *et al.*, 2015). Reconciling historical production and social constructs through a reframing approach may facilitate integrated research and action around disasters and risk reduction. At the very least, it is an opportunity for dialog across difference. Our discussion of social production and construction should help make social science treatments of disaster more accessible to those outside the social sciences, while also facilitating the increased engagement of social scientists in disaster risk reduction efforts and, most importantly, inviting disaster-affected people into processes of mutual learning and discovery in the prevention of, response to, and recovery from disasters.

Social production and social constructionism are not topics of mere academic interest, but also for the critical engagement of policy makers and practitioners. First, claims-making and institutional actors can frame disaster definitions and action priorities; public disaster awareness and behavior is produced by political and media discourse. Second, as Bankoff (2004, p. 92) has stated, "behaviors that appear inappropriate or illogical to external agency or relief workers may be entirely consistent and rational actions when understood in the context of the operating schema of the individuals experiencing such phenomena." Limited knowledge about how disasters are constructed in a particular community may be responsible for the failure of disaster risk reduction programs. Relief workers and disaster risk reduction practitioners from outside disaster-stricken communities can benefit from exploring the power relations preceding the social disaster construction. And finally, research on how disasters are socially produced can contribute to policy-makers' and practitioners' capacity to manage and reduce disaster risk.

Notes

1. This proposition has its roots in many philosophical traditions but is most often traced back to Immanuel Kant (concepts structure, order and facilitate experience), Karl Marx (consciousness is a product of social existence) and George Herbert Mead (identity is constructed through relationships). Michel Foucault (1995, p. 31) based much of his constructionist approach to studying histories "of the present" on the genealogical methods of Friedrich Nietzsche.
2. www.citylab.com/environment/2017/08/this-storm-has-it-all/538053/?utm_source=fbia
3. Quoted with written permission of the author.
4. By fetishization and reification we mean processes by which people come to perceive relational processes such as disasters as natural events, as "things" independent of history and society.

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About the authors

Lei Sun is PhD Candidate in the Institute of Geology, China Earthquake Administration.

A.J. Faas, PhD, is Associate Professor of Anthropology at San José State University. A.J. Faas is the corresponding author and can be contacted at: aj.faas@sjsu.edu

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